

REMARKS

Applicant has carefully reviewed and considered the Office Action mailed on April 16, 2003, and the references cited therewith.

No claims are amended, canceled, or added; as a result, claims 1- 26 remain pending in this application.

Supplemental Information Disclosure Statement

Applicant respectfully requests that a copy of the 1449 Form, listing all references that were submitted with the Supplemental Information Disclosure Statement filed on April 28, 2003, marked as being considered and initialed by the Examiner, be returned with the next official communication.

Specification Objections

The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter in claim 17.

Applicant has added Figure 7 and a brief description to respond to the objection. The addition does not constitute new matter in view of the fact that the subject matter of claim 17 was fully disclosed in the application at the time that it was filed. The addition of the drawing and description by amendments is supported by claim 17 which constitutes a clear disclosure of the subject matter. Such an amendment is proper (see MPEP 608.01(I)).

§102 Rejection of the Claims

Claims 1-2, 4-12, 14-16 and 20-26 were rejected under 35 USC § 102(e) as being anticipated by Tobita (U.S. 2002/0090501 A1).

Applicant does not admit that the Tobita application is prior art, and reserves the right to swear behind it at a later date. Nevertheless, Applicant respectfully submits that the claims are distinguishable over Tobita for the reasons argued below.

The cited Tobita application, published in the U.S. July 11, 2002, relates to a polymer sheet and a sheet of graphitized carbon fibers having a coating layer of ferromagnetic material on their surface to allow them to be oriented perpendicular to the sheet.

Anticipation requires the presence in a single prior reference disclosure of each and every element of the claimed invention. Claim 1 recites: “at least one carbon nanotube.” In contrast, the cited Tobita patent application describes graphitized carbon fibers with a coating of ferromagnetic material on their surface (Abstract; Paragraphs 0025 – 0041, for example). Thus, the Tobita application does not teach each and every claim element arranged as in claim 1 because it does not show how to make or use a thermally conductive polymer sheet which comprises at least one carbon nanotube. The sole reference in Tobita to carbon nanotubes is a sweeping statement that “However, other forms such as a scale, a whisker, a micro coil, an a carbon nanotube are also applicable” includes nothing further showing how any of the listed materials “are also applicable” In view of the very specific description of the processes in Tobita relative to manufacture of the graphitized carbon fibers of the preferred embodiment with a ferromagnetic coating, Applicants believe that the bare statement that other specifically cited materials are “also applicable,” without a disclosure that would enable one to make the carbon nanotube structure called for in claims 1-2, 4-12, 14-16 and 20-26, fails to make a prima facie case of anticipation in view of Tobita.

Reconsideration and allowance of claims 1-2, 4-12, 14-16 and 20-26 is respectfully requested.

Claim 17 was rejected under 35 USC § 102(e) as being anticipated by O'Connor et al (US 2002/0145194 A1).

Applicant does not admit that the O'Connor et al. application is prior art, and reserves the right to swear behind it at a later date. Nevertheless, Applicant respectfully submits that the claims are distinguishable over O'Connor for the reasons argued below.

Anticipation requires the disclosure in a single prior art reference of each element of the claim under consideration. Claim 1 requires the carbon nanotubes be oriented “substantially parallel to a desired heat transfer axis of the thermal interface.” While O'Connor may relate to a conductive element having a plurality of carbon nanotubes, Applicants can find nothing in O'Connor teaching the claimed orientation limitation of claim 1, for example. Nothing in O'Connor supports the Office Action's assertion that the carbon nanotube fibers in a thermally

conductive sheet have such alignment as “an inherent characteristic property.” Reconsideration and allowance of claim 17 is respectfully requested.

§103 Rejection of the Claims

Claims 1-3, 9 and 12-13 were rejected under 35 USC § 103(a) as being unpatentable over Tobita.

Since this is a rejection under 35 USC § 103(a) based solely upon the Tobita application, claims 1-3, 9 and 12-13 are all allowable over Tobita for the same reasons stated above in response to the rejection of claims 1-2, 4-12, 14-16 and 20-26 under 35 USC § 102(e). Claims 9 and 13 are allowable as adding additional features to what is claimed in independent claims 1 and 9 which are believed to be allowable for the reasons stated in response to the rejections under 35 USC § 102(e). Reconsideration and allowance of claims 1-3, 9 and 12-13 is respectfully requested.

Claims 17-19 were rejected under 35 USC § 103(a) as being unpatentable over O'Connor et al in view of Tobita.

The O'Connor et al patent application is owned by Applicants' assignee, Intel Corporation. For that reason, pursuant to 35 USC § 103(c), the rejection under 35 USC § 103(a) is improper and should be withdrawn.

Reconsideration and allowance of claims 17 - 19 is respectfully requested.

Conclusion

Applicant respectfully submits that the claims are in condition for allowance and notification to that effect is earnestly requested. The Examiner is invited to telephone Applicant's attorney ((612) 373-6970) to facilitate prosecution of this application.

If necessary, please charge any additional fees or credit overpayment to Deposit Account No. 19-0743

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Date

June 19, 2003

By

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CERTIFICATE UNDER 37 CFR 1.8: The undersigned hereby certifies that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail, in an envelope addressed to: Commissioner of Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on this 19 day of June, 2003.

Kacia Lee

Name

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Signature